

# COASTAL IMPACT ASSISTANCE PROGRAM

## Jefferson Parish Project Nominee Fact Sheet

**Project Title:** East/West Grand Terre Island Restoration (BA-30)

**Entity/Individual nominating the project:** Jefferson Parish, Louisiana

**Contact Information:** Marnie Winter, Director  
Jefferson Parish Department of Environmental Affairs  
1221 Elmwood Park Blvd., Suite 1006  
Jefferson, Louisiana 70123  
(504) 736-6440  
mwinter@jeffparish.net

**Total CIAP Funds Requested:** \$ 20,000,000

**Parish CIAP Funds Proposed:** \$ 0

**State CIAP Funds Requested:** \$ 20,000,000

**Infrastructure Funds Proposed:** N/A

**Description and Location of the Project:** This project is located at the mouth of Barataria Bay in Jefferson and Plaquemines Parishes, Louisiana. The islands are bordered by Barataria Bay to the north, Barataria Pass and Grand Isle to the west, Quatre Bayou Pass to the east, and the Gulf of Mexico to the south. Grand Terre Islands are the westernmost members of the Plaquemine barrier shoreline and are the result of a westerly littoral transport.

The proposed project for East Grand Terre Island seeks to implement the restoration measures as designed and engineered through the CWPPRA program. The project has already received approximately \$2.3M in design funding and it recently just missed the cutoff to receive construction funding of approximately \$27M. Project strategies are 1) to construct 71 acres of dune platform to +6 feet NAVD-88, 82 acres of beach, and 450 acres of back barrier marsh on East Grand Terre, 2) to place marsh creation material at an elevation of +2.3 feet NAVD-88 and allow it to settle and dewater down to the intertidal range, 3) to utilize effective planting schemes and sand fencing to maximize vegetative coverage and survival along with providing increased dune stabilization, 4) create tidal ponds and creeks and ensure tidal exchange by degrading retention dikes that do not naturally degrade.

Restoration of western Grand Terre Island is proposed through the use of the Coastal Erosion Mitigation Solution<sup>®</sup> (CEMS<sup>®</sup>) System developed by Beach Restoration, Inc., which integrates Scientific Analysis, Nature, Engineering and Technology. The CEMS<sup>®</sup> uses a detailed process of data gathering, assessment, integration and sensitivity analysis to develop a detailed understanding of site-specific characteristics. Computer modeling and analysis produce a discrete solution that will guide the placement of underwater, low profile, and porous geotubes to achieve sediment equilibrium, allowing the breach to close. The project strategy for West Grand Terre Island is to install a series of underwater, low profile, and porous geotubes perpendicular to the Gulf shoreline to form a deposition zone thus enhancing the ability to trap sands and promote beach restoration.

**Project Type:** Conservation, restoration and protection of coastal area, including wetland

**Project Justification:** Over time, the high frequency of tropical storms, high bay and gulf shoreline erosion rates, the subsidence of back barrier marshes, and a lack of sand in an already sediment deprived system have caused the breakup of Grand Terre into two islands. In addition, these processes have resulted in the loss of natural terrestrial and aquatic barrier island habitats. The project was included on CWPPRA Priority Project List 9 and

received Phase 1 funding for engineering and design and is now ready for construction. Due to high construction cost, the CWPPRA project was amended to focus on eastern Grand Terre, where restoration needs are more immediate. While western Grand Terre does occasionally receive sediment input from beneficial use of dredge material derived from maintenance of the Barataria Bay Waterway Pass, channel maintenance also tends to increase erosion on the flanking island shorelines as the inlet seeks to return to equilibrium with the tidal current regime. Installation of geotubes perpendicular to the Gulf shoreline will serve to capture and retain sediments needed to sustain the island and will help to reduce the dredging cycle for Barataria Pass.

The project is consistent with the following coastal restoration initiatives:

COAST 2050: TOWARD A SUSTAINABLE COASTAL LOUISIANA:

*Coastwide Strategy:*

Maintain or restore ridge functions  
Beneficial use of dredged material from maintenance operations  
Dedicated dredging for wetland creation  
Stabilization of major navigation channels

*Regional Strategy:*

#22. Restore/maintain barrier headlines, islands, and shorelines.

*Previously Proposed Strategies:*

Creation and restoration of the barrier shoreline

LOUISIANA COASTAL AREA ECOSYSTEM RESTORATION STUDY (LCA):

*Initial Near-Term Critical Restoration Features:*

3. Barataria Basin Barrier Shoreline Restoration

*Strategies:*

Barrier island restoration through placement of sand from offshore sources or the Mississippi River to sustain key geomorphic structures.

COASTAL IMPACT ASSISTANCE PROGRAM (CIAP):

Protect Critical infrastructure

**Project Cost Share:**      State = 0 %  
  Parish = 0 %